

Amendments to the Claims:

1. (Original) An antibody that binds to loop 6 of human CCR5 and inhibits infection of immunodeficiency virus of human cells.
2. (Original) The antibody of claim 1, wherein the immunodeficiency virus is human immunodeficiency virus type I, human immunodeficiency virus type 2 and simian immunodeficiency virus.
3. (Original) The antibody of claim 1, wherein the antibody is a monoclonal antibody.
4. (Original) The antibody of claim 3, wherein the monoclonal antibody is a single chain antibody.
5. (Original) The antibody of claim 1, wherein CDR2 of the heavy chain variable region of the antibody comprises amino acid sequence GSTX₁YNPSL [SEQ ID NO: 32], wherein X₁ is asparagine (N) or threonine (T).
6. (Original) The antibody of claim 1, wherein CDR2 of the light chain variable region of the antibody comprises amino acid sequence DAX₂ X₃L [SEQ ID NO: 33], wherein X₂ is threonine (T) or serine (S), and X₃ is threonine (T) or aspartic acid (D).
7. (Original) The antibody of claim 1, wherein the CDR2 of the heavy chain variable region of the antibody comprises amino acid sequence GSTX₁YNPSL [SEQ ID NO: 32]; and CDR2 of the light chain variable region of the antibody comprises amino acid sequence DAX₂ X₃L [SEQ ID NO: 33], wherein X₁ is asparagine (N) or threonine (T), X₂ is threonine (T) or serine (S), and X₃ is threonine (T) or aspartic acid (D).
8. (Original) The antibody of claim 1, wherein the CDR3 of the heavy chain variable region of the antibody comprises 5, 6, 7, 8, 9 or more consecutive amino acid residues of an amino acid sequence selected from the group consisting of SEQ ID NOs: 43-45.

9. (Original) The antibody of claim 1, wherein the CDR3 of the light chain variable region of the antibody comprises 5, 6, 7, 8, 9 or more consecutive amino acid residues of an amino acid sequence selected from the group consisting of SEQ ID NOs: 46-48.
10. (Original) The antibody of claim 1, wherein the CDR3 of the heavy chain variable region of the antibody comprises an amino acid sequence selected from the group consisting of SEQ ID Nos: 43-45; and CDR3 of the light chain variable region of the antibody comprises an amino acid sequence selected from the group consisting of SEQ ID Nos: 46-48.
11. (Original) The antibody of claim 1, wherein the heavy chain variable region of the antibody comprises an amino acid sequence selected from SEQ ID Nos: 36, 38, and 40.
12. (Original) The antibody of claim 1, wherein the light chain variable region of the antibody comprises an amino acid sequence selected from SEQ ID Nos: 37, 39, and 41.
13. (Currently Amended) The antibody of claim 1, wherein the antibody is a single chain antibody ~~is selected from the group consisting of~~ SEQ ID NOs ~~NO: 19, 21, 23, 27, 29, and 31.~~
14. (Original) The antibody of claim 1, wherein the antibody is encoded by a polynucleotide selected from the group consisting of SEQ ID NOs: 18, 20, 22, 26, 28, and 30.
15. (Original) The antibody of claim 1, wherein the loop 6 of human CCR5 comprises SEQ ID NO: 2.
16. (Original) A recombinant expression vector encoding a polypeptide selected from the group consisting of SEQ ID NOs: 36-41.
17. (Original) The recombinant expression vector of claim 16 is a bacterial, yeast, plant, mammalian or viral expression vector.

18. (Original) A recombinant cell expressing a polypeptide selected from the group consisting of SEQ ID NOs: 36-41.
19. (Original) The recombinant cell of claim 18 is a bacterial, yeast, plant or mammalian cell.
20. (Original) The recombinant cell of claim 18 is a human cell.
21. (Original) An antibody that binds to the N-terminus of human CCR5 and comprises a heavy chain variable region identified by SEQ ID NO: 34.
22. (Original) The antibody of claim 21, wherein the antibody is a monoclonal antibody.
23. (Original) The monoclonal antibody of claim 21 wherein the light chain variable region is identified by SEQ ID NO: 35.
24. (Original) The monoclonal antibody of claim 21 is encoded by a polynucleotide identified by SEQ ID NO: 16 or 24.
25. (Original) The monoclonal antibody of claim 21 is a single chain antibody.
26. (Currently Amended) The monoclonal antibody of claim 25, wherein the single chain antibody is SEQ ID NO: ~~17~~ or 25.
- 27-35. (Cancelled with Prejudice)